

**List of Topics for Interagency Performance & Risk Assessment Community of Practice (P&RA CoP)
Discussion
1/19/2016**

Webinars being conducted or planned for 2016/2017:

- Deep Borehole Disposal: IAEA Safety Test Case for Vaalputs, South Africa (Matt Kozak, scheduled for Jan. 28, 2016)
- Multivariate decisional analyses: Methodology and case studies (Ignor Linkov and Matthew Bates, planned for Feb. 23, 2016)
- Software QA requirements for supporting environmental management decisions (Bob Murray, TBD)
- Effective communication of risk assessment methodologies and results (TBD)
- Speciation and transport of technetium in tanks and the subsurface environment (TBD)

Webinars conducted by 2015:

- Guidance for Conducting Technical Analyses for 10 CFR Part 61 (Christopher Grossman, 5/20/2015 Webinar)
- Probabilistic Analysis of Inadvertent Intrusion and the IAEA HIDRA Project (Roger Seitz and Paul Black, 8/18/2015 Webinar)
- EPA Radiation Risk Assessment Approach (PRG and DSS Calculators) (Stuart Walker, October 13, 2015 Webinar)
- Congressionally mandated review of the use of risk-informed management in the DOE EM program (Mike Greenberg, Steve Krahn, and Tim Fields, November 10, 2015)
- Groundwater remedy optimization (Kirby Biggs, November 12, 2015)
- The use of a graded approach (12/12/2013 Webinar)
- Features, events, and processes (FEPs) and their implementation for a PA (systems approach, safety functions, ...) (6/3/2014 Webinar)
- Status of regulatory activities at NRC (10 CFR Part 61 updates, unique wastes, conc. avg.) and DOE Order 435.1 updates (3/16/2015 WM2015 Panel Session 004)
- Modeling of engineered features, including covers, liners, and waste forms (2/20/2014 Webinar)
- Interpretation of results for decision making (probabilistic, deterministic, what-ifs, biases, ...) (10/16/2014 Webinar)
- Decisional analysis under uncertainty (10/16/2014 Webinar)

Suggestions from the Steering Committee (prior to the 8-22-2013 Steering Committee Webex mtg except for the last 3 noted with names):

- The use of a systems approach to better explain the roles of different design features for performance and their contributions to demonstrating compliance with performance objectives

- Interpretation of performance objectives, including how to interpret “what-if” scenarios and output distributions that may exceed performance objectives
- Effective implementation of performance confirmation programs as part of the PA maintenance process
- How to address features, events and processes (identifying and screening for a specific application). (6/3/2014 Webinar)
- Modeling approaches to take credit for waste forms, containers, and barriers in general.
- Nuclear Regulatory Commission (NRC) activities associated with unique waste streams and the 10 CFR Part 61 update.
- Updates on activities of the Cementitious Barriers Partnership and the Advanced Simulation Capability for Environmental Management Project. (2/5/2014 Webinar)
- Specific issues arising from PAs underway in Kentucky and Ohio.
- Lessons learned from the most recent PAs.
- Recent discussions regarding the necessity to have liners for near-surface disposal facilities and efforts to address pros and cons from a long-term performance perspective (the importance of new information on liner durability from Beth Gross and others suggesting much longer times (order of 1,000 years) for effective performance)
- Use PA as an assessment, not a decision document. PA is source document, individual compliance assessments for different regulators based on source document.
- Often many different regulatory perspectives on an individual problem.
- The use of a graded approach (Alaa Aly/Dib G) (12/12/2013 Webinar)
- EPA CERCLA approach towards alternative disposition (e.g., outside of licensed disposal facilities) of radioactive material (Stuart Walker)
- Performance of cementitious materials and their use in waste management (David Kosson/Jim Clarke) (2/5/2014 Webinar)

Suggestions at the 2011 PA CoP Technical Exchange Meeting:

- Confidence building and performance confirmation (integration of monitoring and modeling); examples of retrospective studies to demonstrate effectiveness of modeling
- Features, events and processes (and how to efficiently apply in practice) (6/3/2014 Webinar)
- Modeling of different waste forms (cementitious, activated metals, glass, etc.)
- A standardized view of specific elements of performance assessment (to illustrate similarities between PAs and PA-like analyses)
- Effective communication of technical topics to the public (3/16/2015 WM2015 Panel Session 004)
- PA topical presentations to describe the process to the general public (currently viewed as a black box)
- Interpretation of results and accounting for biases in conceptual models (such as excluding processes)
- Appropriate use of generic data and upscaling of data for use in models
- Visualization tools and approaches
- Case histories to illustrate evolution of conceptual models as new information is obtained (graded approach, iterative process)
- Examples of QA experiences and approaches from Yucca Mountain

- Guidance for a common reporting structure for PAs and supporting documents used for input data or assumptions
- Evaluating compliance vs. a deterministic standard when using probabilistic modeling approaches and communicating this to decision makers and stakeholders
- Waste characterization and waste package confirmation as inputs for modeling

Suggestions after the 2014 P&RA CoP Technical Exchange Meeting:

- Confidence building in performance and risk assessments models (Kirby Biggs, November 12, 2015)
- Speciation and transport of technetium in tanks and the subsurface environment (TBD)
- Effective communication of risk assessment methodologies and results to various stakeholders (Joanna Burger & Susan Santos, TBD)
- A Common-Sense Probabilistic Approach to Assessing Inadvertent Human Intrusion into LLW at the Nevada Test (Originally presented at WM1997) (Paul Black and Roger Seitz, 8/18/2015 Webinar)
- IAEA Borehole Safety Test Case; Vaalputs, South Africa (Originally presented at WM2002) (Matt Kozak, planned for December 2015)
- EPA guidance on use of Preliminary Remediation Goals (PRG) Calculator (Stuart Walker, October 13, 2015 Webinar)